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(71) Applicant and
(72) Inventor: **BEDINGTON, Guy, Willoughby** [AU/AU]; 4 Wendy Court, Toowoomba, Queensland 4350 (AU).

(74) Agent: **GRIFFITH HACK**; Level 10, 167 Eagle Street, Brisbane, Queensland 4000 (AU).

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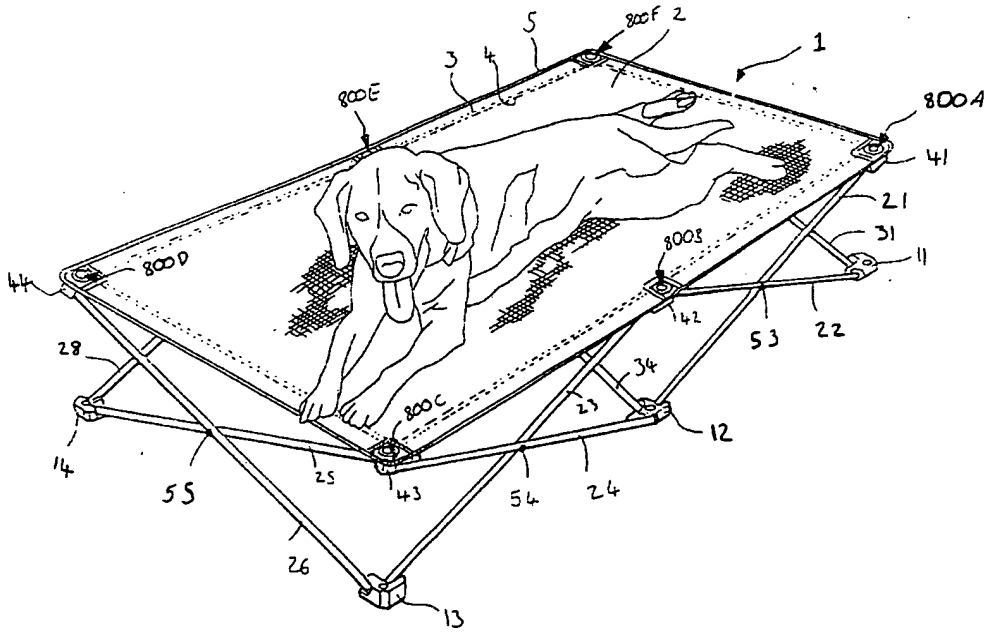

(57) Abstract: A bed (1) for pets which is reconfigurable between an extended configuration and a compact storage configuration. In the extended configuration, a substantially horizontally extending sheet (2) of material is supported spaced apart from the ground by a plurality of substantially rigid support members (21-34) so that a pet may be supported on the sheet (2).

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BED FOR PETS

BACKGROUND OF THE INVENTION

The present invention relates to a bed for pets and especially, but not exclusively, to a bed for dogs.

Many dog owners provide beds for their dogs. Such beds are typically substantially rigid metal or wooden frames constructed to support a generally horizontally extending sheet of textile material at a given height above the floor or ground, so that the dog may be supported upon the sheet of textile material. Such beds provide comfort for dogs, and also help to protect them from ground level drafts and dampness. Such beds also provide a familiar and psychologically comfortable environment for dogs, and help an owner control where a dog sleeps by positioning the dog's bed accordingly. However, such beds are not available at most locations where an owner travelling with a dog might choose to temporarily sojourn. An owner who takes a dog on an overnight trip may be faced with the dog suffering from one or more of the following: discomfort due to lack of a suitable surface to sleep on; distress due to unfamiliar surroundings; restlessness due to uncertainty regarding where it should sleep and a desire to be close to its familiar owner; ill health due to sleeping in a damp, drafty, chilly or otherwise unsuitable environment. It would therefore be desirable to find a means of overcoming or mitigating at least some of these problems.

SUMMARY OF THE INVENTION

According to a first aspect of the present invention, there is provided a bed for pets which includes at least one sheet of material and a plurality of substantially rigid support members wherein said bed is reconfigurable between:

an extended configuration, in which the sheet of material is supported substantially horizontally, spaced

apart from the ground by the plurality of substantially rigid support members so that a pet may be supported thereon; and

a compact storage configuration.

Preferably, said bed for a pet is adapted for use as a dog bed.

Preferably, said compact storage configuration is considerably more compact in both length and width, than said extended configuration.

Preferably, in the extended configuration, the bed is considerably smaller in height than in length and width.

Preferably, in the extended configuration, the height of the bed is not more than half as great as the length and width.

Preferably, said bed is generally rectangular in its extended configuration. Alternatively, said bed may be of a generally regular polygonal shape. Said bed may be generally square, generally pentagonal or generally hexagonal.

Preferably, each support member is in the form of an elongate rod, pole or beam.

Preferably, each support member is tubular.

Preferably, each support member is in the form of a generally cylindrical tube.

Preferably, said bed includes a number of sheet attachment members, each for attaching said sheet to one or more of said support members.

Preferably, each sheet attachment member is attached to at least two support members, so that it couples the at least two support members to each other and to the sheet.

Preferably, each sheet attachment member has said at least two support members pivotally attached thereto.

Preferably, in use, with a pet upon the bed, one or more of the parts of the sheet attached to a sheet attachment member is inclined in a downward direction

towards a central part of the sheet.

Preferably, each sheet attachment member is, in use, connected to at least two support members so that when the bed is in its extended configuration, provision of a weight onto the sheet can cause some rotation of the sheet attachment members relative to the respective support members.

In a preferred embodiment, the weight of a pet on the sheet causes the sheet (and/or reinforcing member, discussed below) to pull the sheet attachment members so that they incline towards a central portion of the sheet. This allows the parts of the sheet which are attached to the inclined sheet attachment members to be inclined so that the sheet may more closely conform to the contours of the pet's body.

Preferably, said bed includes a number of foot members.

Preferably, the number of foot members is equal to the number of sheet attachment members.

Preferably, each foot member is attached to at least two support members.

Preferably, the attachment between each foot member and said at least two support members is pivotal attachment.

Preferably, said sheet is provided with a number of means for coupling to said sheet attachment members spaced apart thereon.

Preferably, said sheet has a number of corners and is provided with a means for coupling to a sheet attachment member at each corner thereof.

Preferably, said means provided on the sheet for coupling the sheet to a sheet attachment member is an aperture extending through the sheet.

Preferably, the aperture is reinforced.

Preferably, the aperture is reinforced by a reinforcing eyelet.

The area adjacent the aperture may be reinforced

by a reinforcing patch.

Preferably the reinforcing patch is stitched to the sheet.

Preferably, each foot member is, when the bed is in use in its extended configuration, substantially vertically below a corresponding sheet attachment member.

Preferably, each support member extends between a given sheet attachment member and a given foot member.

Preferably, said given foot member is not the foot member which is substantially vertically below the said given sheet attachment member when the bed is in its extended configuration.

Preferably, the given foot member is a foot member which is a neighbour of the foot member which is substantially directly below the given sheet attachment member.

Preferably, each support member is pivotally coupled at an intermediate portion thereof to an intermediate portion of at least one other support member.

Preferably, said intermediate portions are generally central portions.

Preferably, reconfiguration of the bed from the extended configuration to the compact configuration includes drawing each of the sheet attachment members towards each of the other sheet attachment members.

Preferably, reconfiguration of the bed from the extended configuration to the compact configuration includes drawing each of the foot members towards each of the other foot members.

Preferably, in use, all of the sheet attachment members are in substantially a single plane when the bed is in its extended configuration and all of the sheet attachment members are in substantially a single plane when the bed is in its compact configuration.

Preferably, in use, all of the foot members are in substantially a single plane when the bed is in its extended configuration and all of the foot members are in

substantially a single plane when the bed is in its compact configuration.

Preferably, the drawing of each of the sheet attachment members towards each of the other sheet attachment members is facilitated by a lozenging action of a support structure provided by the support members.

Preferably, each given support member is pivotally coupled at an intermediate portion thereof to a support member which has an upper end thereof connected to the sheet attachment member which is substantially vertically above the foot member to which the lower end of the given support member is connected, and which has a lower end coupled to the foot member which is substantially vertically below the sheet attachment member to which upper end of the given support member is coupled.

Preferably, two neighbouring horizontally spaced apart sheet attachment members, the two foot members directly below the two given sheet attachment members and two support members which are each attached to one of said neighbouring sheet attachment members and one of said foot members, said support members being pivotally mutually coupled at respective intermediate portions thereof, form a support structure portion with an x-shaped configuration.

Preferably, said bed includes a number of said support structure portions. It will be appreciated that different support structure portions correspond to different pairs of sheet attachment members, foot members and support members, and that each foot member or sheet attachment member may form part of two or more support structure portions.

Preferably, a chain of said support structure portions extends around the perimeter of the bed.

Preferably, the sheet is supported via the sheet attachment members by a plurality of said support structure portions, and no other rigid support members support or locate the sheet attachment members. In

particular, a preferred embodiment includes no support members which are vertical when the bed is in the extended configuration.

Alternatively, in addition to said x-shaped support structures, one or more vertical support members may be provided in order to vertically space a given sheet attachment member from the foot member substantially therebelow.

Preferably, when the bed is in an extended configuration, each x-shaped support structure portion is configured so that it is relatively short and wide, and when the bed is in its compact storage configuration, each x-shaped support structure portion is configured so that it is relatively tall and narrow.

Preferably, all of the support members are of a substantially similar length.

Preferably, said bed includes four of said support structure portions arranged in a square when the bed is in its extended configuration, one support structure portion forming each side of said square.

Preferably, said bed includes seven of said support structure portions, arranged as two squares with one common side, to form a bed with a generally rectangular shape.

Preferably, the minimum height of each support structure portion, in use, is predetermined by a provision of one or more flexible connection elements, attached to two horizontally spaced apart points of said bed to limit the horizontal separation of said two spaced apart points.

Preferably, the two spaced apart points are located on two respective sheet attachment members.

Preferably, at least one of said flexible connection elements includes the sheet.

Preferably, at least one of said flexible connection elements includes a reinforcing member attached to two sheet attachment members.

Preferably, said reinforcing member is a

reinforcing strap.

Preferably, the height of the bed in its extended configuration is between 5cm and 40cm.

Preferably, the height of the bed in its extended configuration is between 10cm and 35cm.

Preferably, the height of the bed in its extended configuration is between 20cm and 30cm.

According to a second aspect of the present invention, there is provided kit for a bed for pets comprising a plurality of support members, a plurality of sheet connection members, a plurality of foot members and a sheet for assembly into a bed for pets in accordance with the first aspect.

According to a third aspect of the present invention, there is provided kit for a bed for pets, comprising a bed for pets in accordance with the first aspect of the present invention, and a bag for storage of said bed and retention of said bed substantially in its compact storage configuration.

It will be appreciated that features which may beneficially be included in the first aspect of the invention may also be beneficially included in the second and third aspects.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention will be described by way of example only with reference to the accompanying drawings in which:

Fig. 1 is a perspective view showing a dog reclining on a bed for pets in accordance with the present invention;

Fig. 2 is a perspective view from below of the embodiment of Fig. 1 in an extended configuration;

Fig. 3 is a perspective view from below of the embodiment of Fig.s 1 and 2 in a configuration between the extended configuration and a compact storage configuration;

Fig. 4 is a perspective view of the bed of Fig.s 1 to 3 in the compact storage configuration, which also shows a drawstring bag suitable for containing the bed;

Fig. 5 is a perspective view of a corner foot member of the embodiment of Fig.s 1 to 4 showing its pivotal attachment to two support members;

Fig. 6 is a perspective view of a central side foot member of the embodiment of Fig.s 1 to 4, showing its pivotal attachment to three support members;

Fig. 7 is a perspective view from below of an element of the embodiment of Fig.s 1 to 4 including a central side sheet attachment member pivotally attached to three support members;

Fig. 8 is a vertical cross-sectional view on VIII-VIII of Fig. 7; and

Fig. 9 is a perspective view of a variation on the embodiment of Fig. 1.

DESCRIPTION OF PREFERRED EMBODIMENTS

With reference to the drawings, a bed for a pet, generally designated 1 comprises a generally rectangular sheet 2 of flexible fabric, approximately twice as long as it is wide. The sheet is provided with first and second rows of reinforcing stitching 3, 4 which extend around the entire periphery of the sheet 2 approximately 5cm from its edge. The sheet 2 is also provided with an edge beading 5 in the form of a strip of material which is folded over the edge of the sheet 2 and extends a short distance from the edge both on a top surface and a bottom surface of the sheet 2, so as to completely enclose the edge of the sheet. The edge beading 5 extends around the entire perimeter of the sheet 2 and is secured thereto by stitching 805. The sheet 2 is made of a close-woven polymer material which is robust and easy to clean, machine washable, and resistant to penetration or damage by pets or insects.

The sheet 2 is supported spaced apart from the

floor or other surface on which the bed rests, at a height of approximately 25cm by a plurality of substantially rigid support members in the form of tubular, generally cylindrical, metal rods with an outside diameter of approximately 15mm. In the embodiments shown in Fig.s 1 to 4, there are first to fourteenth support members 21 to 34 respectively. The support members 21 to 34 are attached to the sheet 2 at six attachment points on the sheet via first to sixth sheet attachment members 41 to 46. Each of the first to sixth sheet attachment members 41 to 46 attaches to the sheet via an attachment assembly (described in detail hereafter with reference to Fig. 8). The first to sixth attachment assemblies, designated 800A to 800F in Fig. 1, correspond to the first to sixth sheet attachment members 41 to 46 plus means for coupling to a sheet attachment member provided on the sheet in the form of an aperture at each of the six attachment points.

Each of the first to sixth sheet attachment members 41 to 46 is pivotally attached to either two or three support members with each of the support members attached to a given sheet attachment member being pivotally attached thereto so that the support member may rotate in a plane substantially perpendicular to the plane in which at least one of the other support members attached to the same sheet attachment member rotates.

The support members are also pivotally attached to first to sixth foot members 11 to 16. Each support member is thus attached to one sheet attachment member and one foot member. Each of the first to sixth foot members 11 to 16 is pivotally attached to either two or three support members such that each support member is able to rotate relative to the foot member in a plane substantially perpendicular to the plane in which at least one of the other support members attached to that foot member may rotate.

Each support member is further pivotally attached to one other support member substantially at the central

point of each of the support members. It will be appreciated that in order for these support members to remain in generally vertical planes during use of the bed and for the area defined by the first to sixth feet 11 to 16 to be equal to the area defined by the first to sixth sheet attachment members 41 to 46 (which is preferred and shown in the embodiment of Fig.s 1 to 4) all the support members 21 to 34 are of approximately the same length. Furthermore, each support member is pivotally attached to another support member at the approximately longitudinal centre of each of the support members, although other alternative arrangements are possible.

Each pivotal attachment by which a support member is pivotally attached to another support member is formed by a pivot pin passing through aligned apertures in the support members. A washer (not shown) may be provided about the pivot pin between the support members.

As shown in Fig. 1, a first foot member 11 located at a corner of the bed 1 is, in use, substantially vertically below a first sheet attachment member 41 located at the corner of the generally rectangular sheet 2. Similarly, a second foot member 12 located generally centrally of a long side of the bed, and neighbouring the first foot member 11, is substantially vertically below a second sheet attachment member 42 located generally centrally of a long side of the rectangular sheet 2. A first support member 21 is pivotally coupled to the first sheet attachment member 41 and pivotally coupled to the second foot member 12. A second support member 22 is pivotally coupled to the first foot member 11 and pivotally coupled to the second sheet attachment member 42. A first pivotal connection 53 is provided between the first and second support members 21, 22 at the longitudinal centres thereof.

The first and second sheet attachment members are attached to the rectangular sheet 2 via first and second attachment assemblies 800A, 800B. The first and second

sheet attachment members 41, 42, first and second support members 21, 22 and first and second foot members 11, 12 thus in use form a generally x-shaped support structure portion which may pivot freely at the first pivotal connection 53. As the bed 1 is opened from a compact storage configuration towards an extended configuration, the first and second sheet attachment members 41, 42 fall towards the first and second foot members 11, 12, the support structure portions becoming wider and shorter as the first and second sheet attachment members 41, 42 fall. The width of the support structure is however limited by the distance between the first and second attachment assemblies 800A, 800B, and the length of the portion of the sheet 2 therebetween. Thus, when the width of the support structure is the same as the distance on the sheet 2 between the first and second attachment assemblies 800A, 800B the width of the support structure is constrained, and the height thereof is thus determined. The sheet thus serves as a flexible connection element constraining the horizontal separation of the first and second attachment assemblies, and thus the height of the bed in its extended configuration.

The support structure portion comprising the first and second sheet attachment members 41, 42, first and second support members 21, 22 and first and second foot members 11, 12 is constrained by the sheet 2 to a length of half of one of the long sides of the rectangular sheet 2. It will be appreciated that there are six further similar support structure portions which support the rectangular sheet 2, namely: a second support structure portion comprising the second and third sheet attachment members 42, 43, second and third foot members 12, 13 and third and fourth support members 23, 24; a third support structure portion comprising the third and fourth sheet attachment members 43, 44, third and fourth foot members 13, 14 and fifth and sixth support members 25, 26; a fourth support structure portion comprising the

fourth and fifth sheet attachment members 45, 46, the fourth and fifth foot members 14, 15 and the seventh and eighth support members 27, 28; a fifth support structure portion comprising the fifth and sixth sheet attachment members 45, 46, the fifth and sixth foot members 15, 16 and the ninth and tenth support members 29, 30; a sixth support structure portion comprising the sixth and first sheet attachment members 46, 41, the sixth and first foot members 16, 11 and the eleventh and twelfth support members 31, 32; and a seventh support structure portion comprising the second and fifth sheet attachment members 42, 45, the second and fifth foot members 12, 15 and the thirteenth and fourteenth support members 33, 34. The first to seventh support structure portions may thus be considered to include first to seventh pairs of support members, and the support members of the respective pairs are joined at generally central portions of each support member by first to seventh pivotal connections 53 to 59 respectively. Reconfiguring of the bed from an extended configuration to a compact storage configuration or vice-versa can thus be seen to involve a lozenging or scissoring action of the support members.

With reference to Fig.s 2 and 3 in particular, it should be noted that the support structure portions effectively form two squares, one corresponding to each longitudinal half of the generally rectangular sheet 2 (which having a length of twice its width may be regarded as consisting of two squares). To provide additional reinforcement to prevent the support structure portions (and thus the bed 1) from becoming shorter than is desired, a first reinforcing strap 61 is provided between the first sheet attachment member 41 and the fifth sheet attachment member 45, a second reinforcing strap 62 is provided between the second sheet attachment member 42 and the sixth sheet attachment member 46, a third reinforcing strap 63 is provided between the second sheet attachment member 42 and the fourth sheet attachment member 44 and a

fourth reinforcing strap 64 is provided between the third sheet attachment member 43 and the fifth sheet attachment member 45. The lengths of the reinforcing straps are such that the tensile forces which occur in the sheet 2, the edge beading 5 and the reinforcing straps 61 to 64, which prevent the support structure portions into a shorter and wider configuration, are distributed between the aforementioned elements, so that each effectively acts as a flexible connection element.

It will be appreciated that each support member is able to rotate substantially in a plane defined by the two foot members and two sheet attachment members which make up the support structure portion of which that support member is a part. A slight force applied to force apart any two of the sheet attachment members or foot members, or if the bed is slightly extended and placed on a smooth surface the weight of the bed itself, will cause the bed to 'unfold' to its extended position as illustrated in Figs 1 and 2, at which point the first to seventh support structures are in their widest and shortest configurations.

Manually forcing together any two of the first to sixth foot members 11 to 16, first to sixth sheet attachment members 41 to 46 or first to sixth attachment assemblies 800A to 800F will cause the foot members and support members to come together, making each of the support structure portions taller and narrower. When the attachment assemblies 800A to 800F are substantially adjacent each other and the foot members 11 to 16 are also substantially adjacent each other, the bed is in a compact storage configuration, as shown in Fig. 4.

In a preferred embodiment, as also shown in Fig. 4 the bed is provided with a draw-string bag 400 made from a material similar to that from which the sheet 2 is made, making the draw-string bag 400 robust and durable. The drawstring bag 400 is sized appropriately for containment of the bed in its compact storage configuration and is

provided with a carrying strap 410 made from a webbing material and attached to the material of the bag by stitching. The drawstring bag 400 has a drawstring 420 securable by a clip 430. The drawstring is retained in a hem 440 which extends around the open end of the bag 400. The drawstring bag 400 provides an effective means of carrying the bed in its compact storage configuration while retaining the bed in this configuration, avoiding the tendency of the bed to fall into its extended configuration. The bag 400 serves to protect the bed during transit and also serves to contain dirt, mud or smells from the bed attributable to its close association with a dog. Fig. 4 shows the bed between its extended and compact storage configurations.

The third, fourth and sixth foot members 11, 13, 14, 15 are associated with corners of the sheet 2 and each of said foot members has pivotally attached thereto two support members. The first foot member 11 is illustrated in Fig. 5 and it will be appreciated that the third, fourth and sixth foot members are similar or identical.

With reference to Fig. 5 the first foot member 11 is formed from a plastics material and is pivotally attached to the second and eleventh support members 22, 31. The first foot member 11 has a generally flat bottom wall 501 which has a generally flat, but textured, bottom surface (not shown in Fig. 5 but evident in Fig.s 2 to 4) which, in use, engages the floor or ground. Upstanding from the bottom wall 501 is a first pivot pin supporting wall 505. A pivot pin 510 extends through an aperture (not shown) at an end of the second support member 23 and through an aligned aperture (not shown) in the first pivot pin supporting wall 505. The pivot pin 510 is preferably of the type having a round cap and a hollow shaft, and may be fixed in place by spreading or peigning. A washer (not shown) may be provided at the spread or peigned end of the pivot pin. It will be appreciated that the second support

member 22 may rot[illegible]r swing, in a plane substantially perpendicular to t[illegible]xis of the pivot pin 510. The first foot member 11 has [illegible]cond pivot pin supporting wall 520 substantially perpendicular to the first pivot pin supporting wall 5[illegible]6 and similarly having an aperture therethrough (not shown) through which a pivot pin 530 may pass. The pivot pin 530 also passes through an aperture (not shown) at [illegible]f the eleventh support member 31 in order to pivotally attach the eleventh support member 31 to the first foot member 11. The pivot pin 530 and use thereof are similar to the pivot pin 510 and use thereof. The first foot [illegible]1 also has a thickened portion 540 of the bottom [illegible]which has a generally cylindrical aperture 550 [illegible]pen at its top but closed at its bottom, there[illegible]

It will be appreciated that the second and fifth foot members [illegible] differ[illegible]nt from the first, third, fourth and sixth [illegible]mbers 11, 13, 14, 16, in that they are each pivotally attached to three support members. Fig. 6 illustrates a support member suitable for pivotal attachment to [illegible]port members, in this case the second foot member 12.

The [illegible]ion of the second foot member 12 is generally similar in con[illegible]uction of the first foot member 11 shown in Fig. 5. The second foot member 12 has a bottom wall [illegible], second and third pivot pin supporting wall[illegible]6, 6[illegible]which support respective first, second [illegible] pivot pins 610, 611, 612 which respectively pivotally [illegible]etain the first, fourth and fourteenth sup[illegible]rs 22, 24, 34. The second foot member 12 also has [illegible]ken[illegible]portion 640 of the bottom wall 601 and a [illegible] cylindrical aperture 650 therein which has a cl[illegible]m an[illegible]n open top to its bore. The support members 22, 24, [illegible]are each able to rotate or swing in a pla[illegible]perpendicular to the respective pivot pins 61[illegible] [illegible]planes in which the first and fourth sup[illegible]s 22, 24 may rotate are generally

parallel with each other but slight offset. The plane in which the fourteenth support member 34 may rotate is generally perpendicular to the planes in which the first and fourth support members 21, 24 may rotate.

Fig.s 7 and 8 show in detail the second sheet attachment member 42 and second attachment assembly 800B. The second sheet attachment member 42 is adapted to have the second, third and thirteenth support members 22, 23, 33 pivotally attached thereto. It will be appreciated that the second and fifth sheet attachment members 42, 45 are adapted to have three support members attached thereto whereas the first, third, fourth and sixth sheet attachment members 41, 43, 44, 46 (being associated with the sheet corners rather than the central parts of the long edges of the sheet) are each adapted to have only two support members pivotally attached thereto. The similarities between the second sheet attachment member 42 and the second foot member 12 illustrated in Fig. 6 should be evident to the person skilled in the art.

The second sheet attachment member 42 is provided with a top wall 701 with first, second and third pivot pin supporting walls 705, 706, 707 extending perpendicularly, or vertically downwardly, therefrom. The first, second and third pivot pin supporting walls 705, 706, 707 have apertures (not shown) provided therein for receiving and retaining first, second and third pivot pins 710, 711, 712 by which the second, third and thirteenth support members 22, 23, 33 are pivotally attached to the second sheet attachment member 42. Referring now to Fig. 8, the attachment assembly 800B and attachment of the sheet 2, second and third reinforcing straps 62, 63 and second sheet attachment member 42, will now be described.

The second sheet attachment member 42 has a thickened top wall portion 740 which has an aperture passing therethrough. The aperture consists of a lower larger-diameter portion 808, an axially central smaller-diameter aperture portion 809, and an upper larger-

diameter aperture portion 810, these three portions being axially aligned. A screw 820 has a threaded shaft which has a diameter small enough to pass through the axially central smaller-diameter portion 809 of the aperture and has a head having a diameter too large to pass through the axially central smaller-diameter aperture portion 809. The screw 820 is inserted into the lower larger-diameter aperture portion 808 so that the head is restrained from passing through the central smaller-diameter aperture portion 809 but so that the threaded shaft extends into the upper larger-diameter aperture portion 810. A round headed cap 850 having a cylindrical body portion adapted to fit into the upper larger-diameter portion of the aperture 810 has a female threaded bore therein for cooperation with the threaded shaft of the screw 820. Cooperation of the screw 820 and cap 850 therefore provides a clamping action by relative rotation of the screw 820 and cap 850. The sheet 2 and second and third reinforcing straps 62, 63 are stitched together by reinforcing stitching 3, 4 and the stitching 805 used to secure the edging bead. Also stitched to these layers is a reinforcing pad 860 of leather or a robust plastics material which extends on the upper surface of the sheet only approximately as far as the sheet attachment member 42 extends underneath the sheet. An aperture extends through the layers of sheet 2, reinforcing straps 62, 63 and pad 860 and the aperture is provided with a metal eyelet having an upper part 865 and a lower part 870 which are crimped together in a manner known per se. The upper part 865 of the eyelet has a bevelled edge 865A which cooperates with a lower bevelled edge 850A of the cap 850 in order to allow effective clamping of the sheet 2 and associated layers by the action of the cap 850 and screw 820. The bevelled edges also allows the cap 850 to be slightly recessed into the eyelet 865 avoiding sharp edges which might present a danger to a pet. The described attachment assembly provides secure attachment of the

sheet 2 and reinforcing straps 62, 63 to the sheet attachment member 42 and yet provides an easy means of detaching the sheet 2 (by undoing the screw 820) so that the sheet may be removed from the support members, attachment members and foot members for washing, or may easily be replaced with a replacement part.

A cutaway part in Fig. 8 shows that the second sheet attachment member 42 provides an abutment wall 880 in order to restrict the rotation of a support member 33, thus providing a further means (in addition to the tension in the sheet 2 and reinforcing straps 61, 62, 63, 64) to prevent a support structure portion from becoming wider and shorter than is desired.

The described embodiment provides a bed for a pet which has an extended length of 115cm and an extended width of 62cm but a length of only about 18cm and a width of only about 11cm in its compact storage configuration. Furthermore, the extension from its compact storage configuration to its extended configuration is as simple as resting the foot members upon the floor and gently forcing any two attachment assemblies or foot members away from each other. Changing the configuration from the extended configuration to the compact storage configuration is as simple as gently manually forcing the attachment assemblies, or foot members towards each other. In the preferred embodiment, each of the support members is about 55cm long, and the embodiment can successfully bear weights of 50kg without adverse affects. The described embodiment therefore provides a convenient portable folding bed for pets which is light (weighing only about 4kg) durable and extremely quick and convenient in use. Furthermore, the embodiment provides a bed for a dog which will provide the dog with a comfortable and reassuringly familiar sleeping position, with ease, and away from its normal home.

Variations of the embodiment or alternative embodiments are envisaged which fall within the scope of

the invention. A larger embodiment has an extended length of 135cm, an extended width of 70cm, and a height (in the extended configuration) of 35 cm. A smaller embodiment is generally square having extended width (and length) of 65cm and a height (in the extended configuration) of 25cm. This smaller embodiment includes four foot members, four sheet attachment members and eight support members which form four support structure portions.

In further embodiments, the bed may be of a regular polygonal shape such as a square, pentagon or hexagon, to effectively accommodate pets which have a generally circular "footprint" when they sleep. A rectangular configuration is, however, generally preferred, especially for larger beds, since it allows the support structure portions to form a "chain" around the circumference of the bed and also allows an additional support structure portion to underlie a central portion of the bed. Of course, a longer bed could be provided by having more "squares" made up of the support structure portions. It is envisaged that the structural strength of the bed in the above described embodiment will normally be sufficient. However, if required, one or more vertical additional support members or legs could be provided to give additional support. Such an embodiment is shown in Fig. 9 and is generally designated 900. Vertical legs 902 (only one of which is shown in Fig. 9) in the form of cylindrical rods, fit into apertures (corresponding to apertures 550, 650 of Fig.s 5 and 6) of respective foot members and extend vertically into corresponding apertures (corresponding to aperture 808 of Fig. 8) of the vertically adjacent sheet attachment members. As shown in Fig. 9, the leg 902 is attached to the foot member 12 by a fastener 904, such as a pin, rivet or screw, which secures the leg 902 in the aperture of the foot member. When the bed 900 is reconfigured to its compact configuration, the vertically adjacent sheet attachment member 42 simply lifts off the leg 902. Legs could be provided in as many

of the foot members as desired, but in the embodiment of Fig. 9 only two legs are provided, one in each of the second foot member 12 and the fifth foot member (not shown). Except for the legs 902 and the fasteners 904 for retaining the legs (and perhaps the dimensions since the additional legs 102 are most appropriate for larger beds), the embodiment 900 as shown in Fig. 9 corresponds to the embodiment 100 shown in Fig. 1 and the same reference numerals are used to designate corresponding features of these embodiments.

Because the sheet attachment members and foot members are pivotally attached to the support members, when a substantial weight is placed upon the sheet 2 there is a tendency for the sheet attachment members and foot members to be forced slightly away from the positions in which the top walls 701 of the sheet connection members, and the bottom walls 501, 601 of the foot members are aligned in exactly horizontal planes. The outermost points of the foot members and sheet attachment members are effectively somewhat pulled towards the mass on the sheet 2. However, this is not believed to adversely affect the structural integrity of the bed. Furthermore, this effect appears to enhance the comfort of the bed by allowing the edges of the sheet 2 to be downwardly inclined towards the centre of sheet 2, allowing the sheet to conform more closely to the contours of a body resting upon the sheet 2.

Throughout this specification and the claims, the words "comprise", "comprises" and "comprising" are used in a non-exclusive sense, except where the context requires otherwise.

It is to be understood that, if any prior art publication is referred to herein, such reference does not constitute an admission that the publication forms a part of the common general knowledge in the art, in Australia or in any other country.

Modifications and improvements may be incorporated without departing from the scope of the present invention.

WHAT IS CLAIMED IS:

1. A bed for pets which includes at least one sheet of material and a plurality of substantially rigid support members wherein said bed is reconfigurable between:

an extended configuration, in which the sheet of material is supported substantially horizontally, spaced apart from the ground by the plurality of substantially rigid support members so that a pet may be supported thereon; and

a compact storage configuration.

2. A bed for pets as claimed in claim 1, wherein said bed for a pet is a dog bed.

3. A bed for pets as claimed in either preceding claim, wherein said compact storage configuration is considerably more compact in both length and width, than said extended configuration.

4. A bed for pets as claimed in any preceding claim, wherein, in the extended configuration the bed is considerably smaller in height than in length and width.

5. A bed for pets as claimed in claim 4, wherein, in the extended configuration the height of the bed is no more than half as great as the length and width.

6. A bed for pets as claimed in any preceding claim, wherein the support members form a support structure for said bed and the reconfiguration of the bed from the extended configuration to the storage configuration includes a lozenging action of the said support structure.

7. A bed for pets as claimed in any preceding claim, wherein said bed includes a number of sheet attachment members, each for attaching said sheet to one or more of said support members.

8. A bed for pets as claimed in claim 7, wherein each sheet attachment member is attached to at least two support members, so that it couples the at least two support members to each other and to the sheet.

9. A bed for pets as claimed in either of claims 7 or 8,

wherein, in use, with a pet upon the bed, one or more parts of the sheet attached to a sheet attachment member is inclined in a downwards direction towards a central part of the sheet.

10. A bed for pets as claimed in claim 9, wherein, when the bed is in its extended configuration, provision of a weight onto the sheet causes some rotation of each sheet attachment member relative to support members to which it is attached.

11. A bed for pets as claimed in any of claims 7 to 10, wherein reconfiguration of the bed from the extended configuration to the compact configuration includes drawing each of the sheet attachment members towards each of the other sheet attachment members.

12. A bed for pets as claimed in claim 11, wherein, in use, all of the sheet attachment members are in substantially a single plane when the bed is in its extended configuration and all of the sheet attachment members are in substantially a single plane when the bed is in its compact configuration.

13. A bed for pets as claimed in either of claims 11 or 12, wherein the drawing of each of the sheet attachment members towards each of the other sheet attachment members is facilitated by a lozenging action of a support structure provided by the support members.

14. A bed for pets as claimed in any of claims 7 to 13, wherein said bed includes a number of foot members, and each foot member is, when the bed is in use in its extended configuration, substantially vertically below a corresponding sheet attachment member.

15. A bed for pets as claimed in claim 14, wherein each support member extends between a given sheet attachment member and a given foot member.

16. A bed for pets as claimed in any preceding claim, wherein each support member is pivotally coupled at an intermediate portion thereof to an intermediate portion of at least one other support member.

17. A bed for pets as claimed in claim 16 when dependent upon claim 15, wherein two neighbouring horizontally spaced apart sheet attachment members, the two foot members directly below the two given sheet attachment members and two support members which are each attached to one of said two neighbouring sheet attachment members and one of said two foot members, said support members being pivotally mutually coupled at respective intermediate portions thereof, form a support structure portion with an x-shaped configuration.

18. A bed for pets as claimed in claim 17, wherein said bed includes a number of said support structure portions, different support structure portions corresponding to different pairs of sheet attachment members, foot members and support members.

19. A bed for pets as claimed in claim 18, wherein a chain of said support structure portions extends around the perimeter of the bed.

20. A bed for pets as claimed in any of claims 17 to 19, wherein when the bed is in an extended configuration, each x-shaped support structure portion is configured so that it is relatively short and wide, and when the bed is in its compact storage configuration, each x-shaped support structure portion is configured so that it is relatively tall and narrow.

21. A bed for pets as claimed in any one of claims 17 to 20, wherein the minimum height of each support structure portion, in use, is predetermined by provision of one or more flexible connection elements, attached to two horizontally spaced apart points of said bed to limit the horizontal separation of said two spaced apart points.

22. A bed for pets as claimed in claim 18 or any of claims 19 to 21 when dependent thereon, wherein said bed includes seven of said support structure portions, arranged as two squares with one common side.

23. A bed for pets as claimed in any of claims 18 to 22, wherein, in use, the sheet is supported via the sheet

attachment members by a plurality of said support structure portions, and no other rigid support members support or locate the sheet attachment members.

24. A kit for a bed for pets comprising a plurality of support members, a plurality of sheet connection members, a plurality of foot members and a sheet of material, for assembly into a bed for pets in accordance with any preceding claim.

25. A kit for a bed for pets, comprising a bed for pets in accordance with any of claims 1 to 23, and a bag for storage of said bed and retention of said bed substantially in its compact storage configuration.

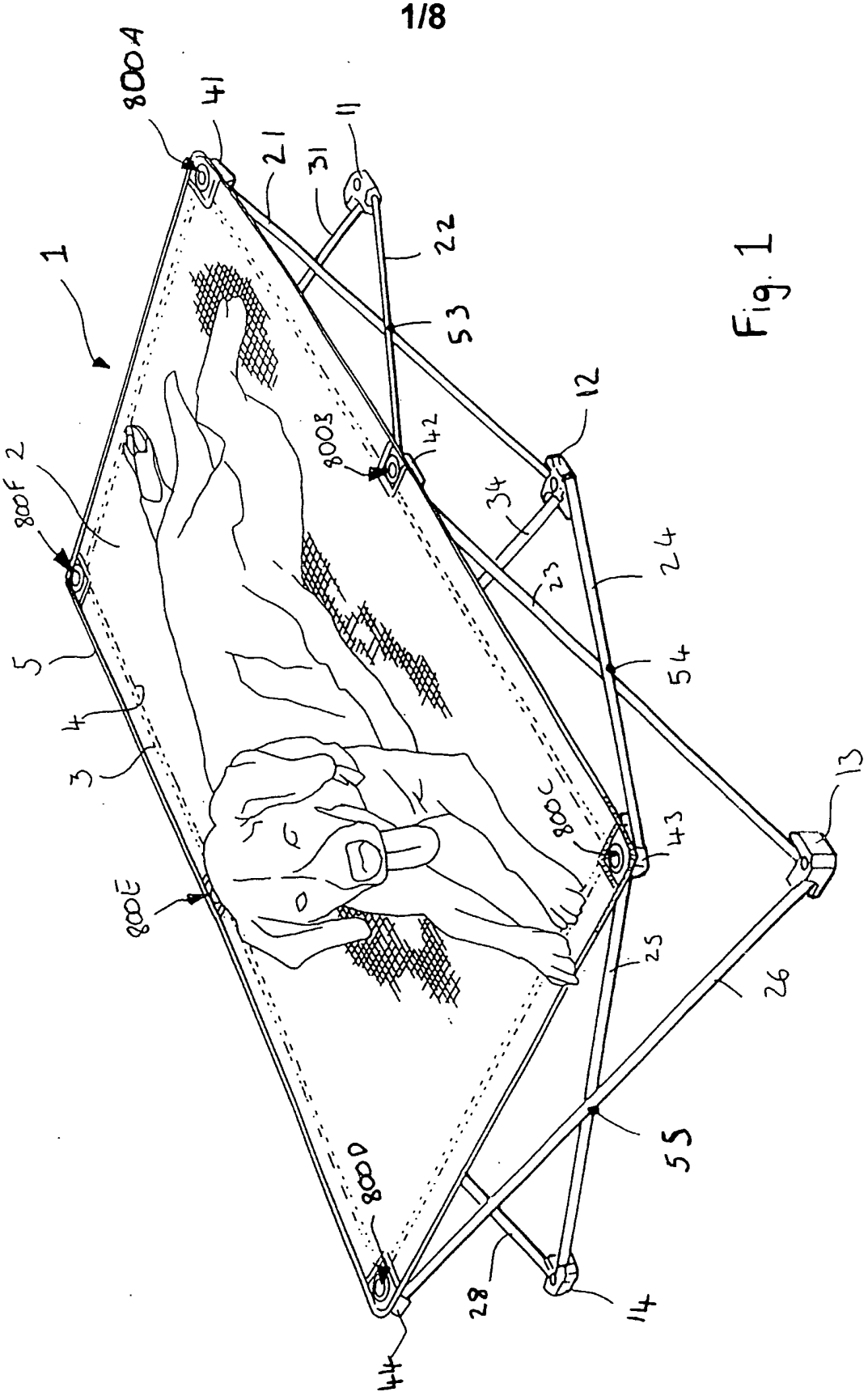
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Fig. 1

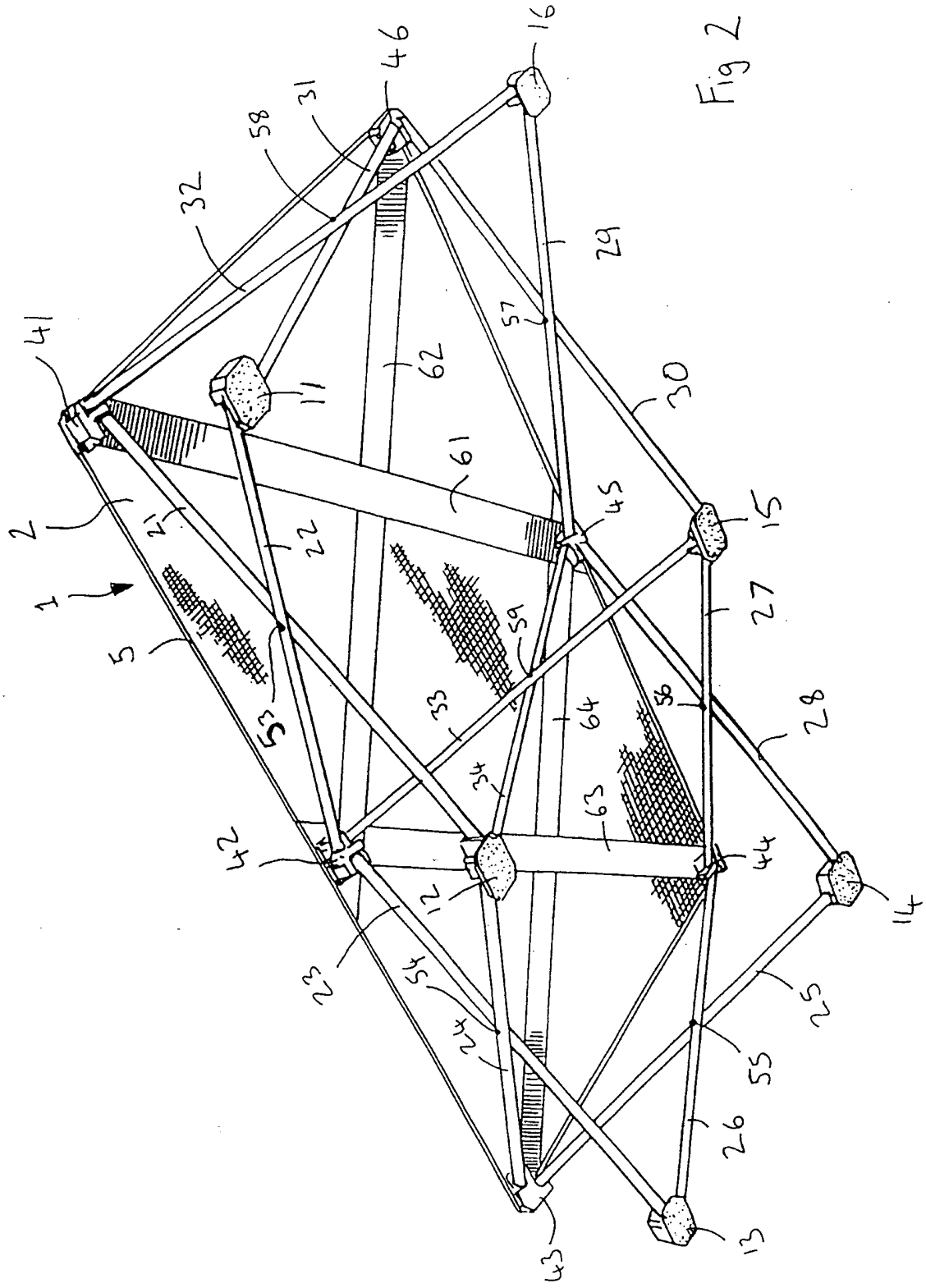
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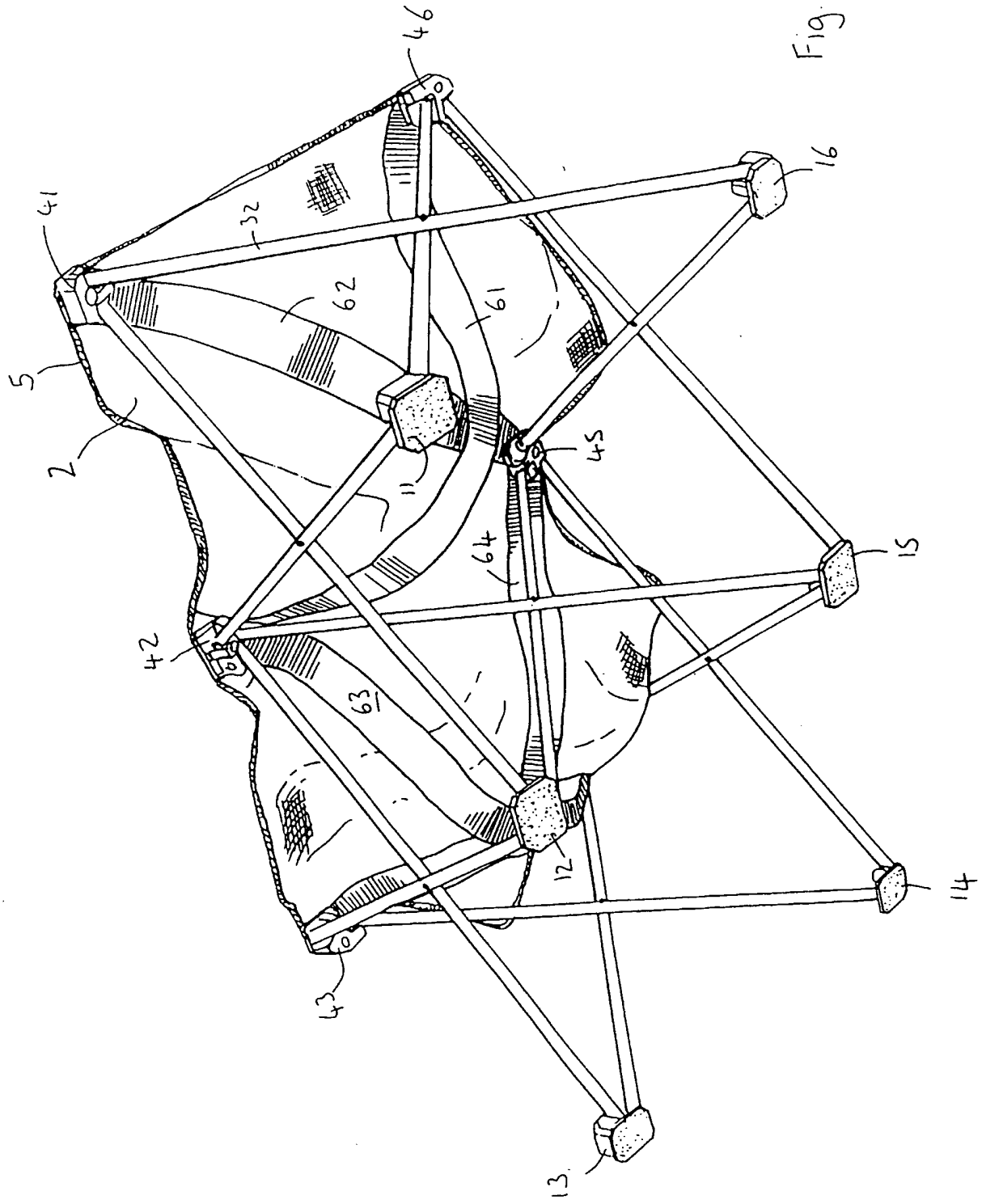
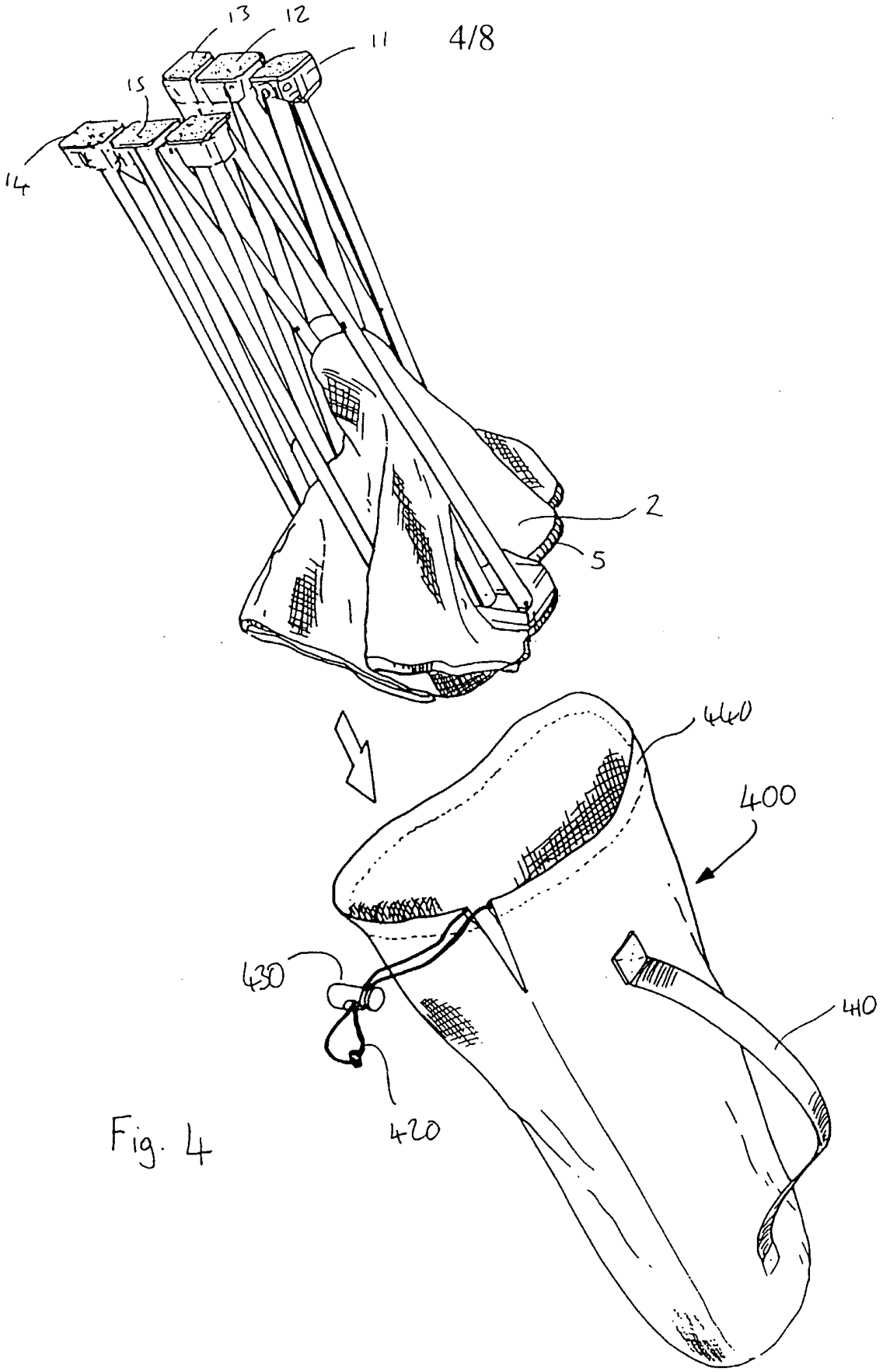
Fig 2

Fig. 3





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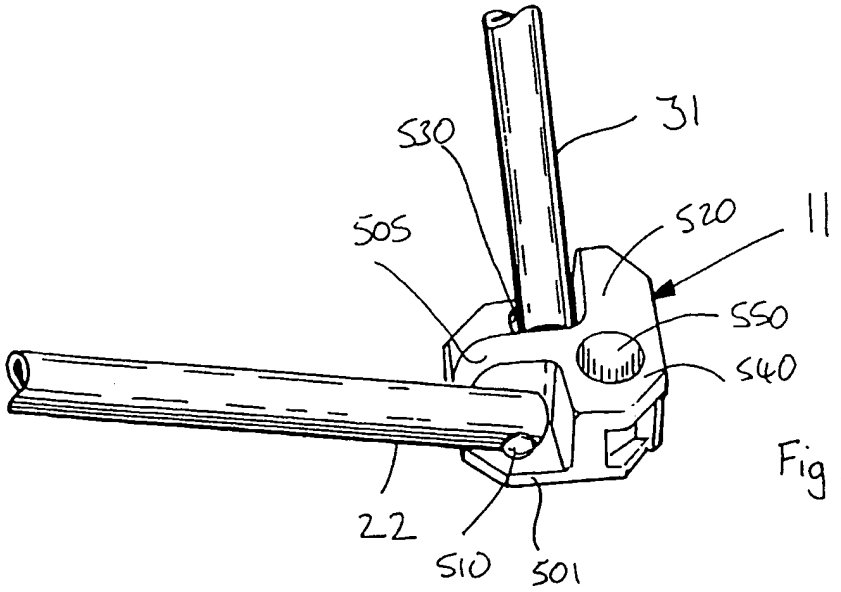
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Fig 5

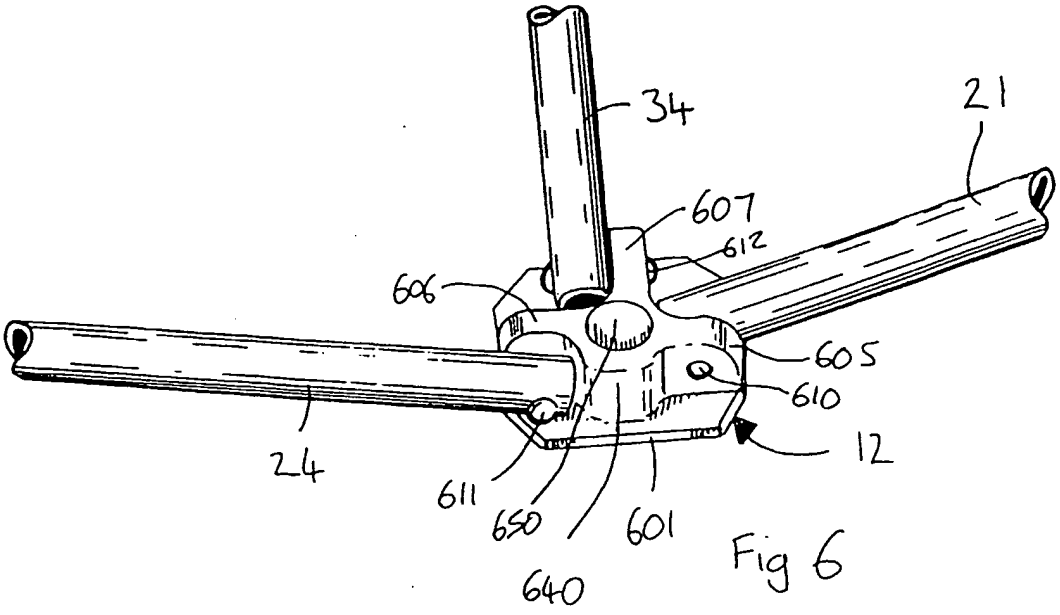
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Fig 6

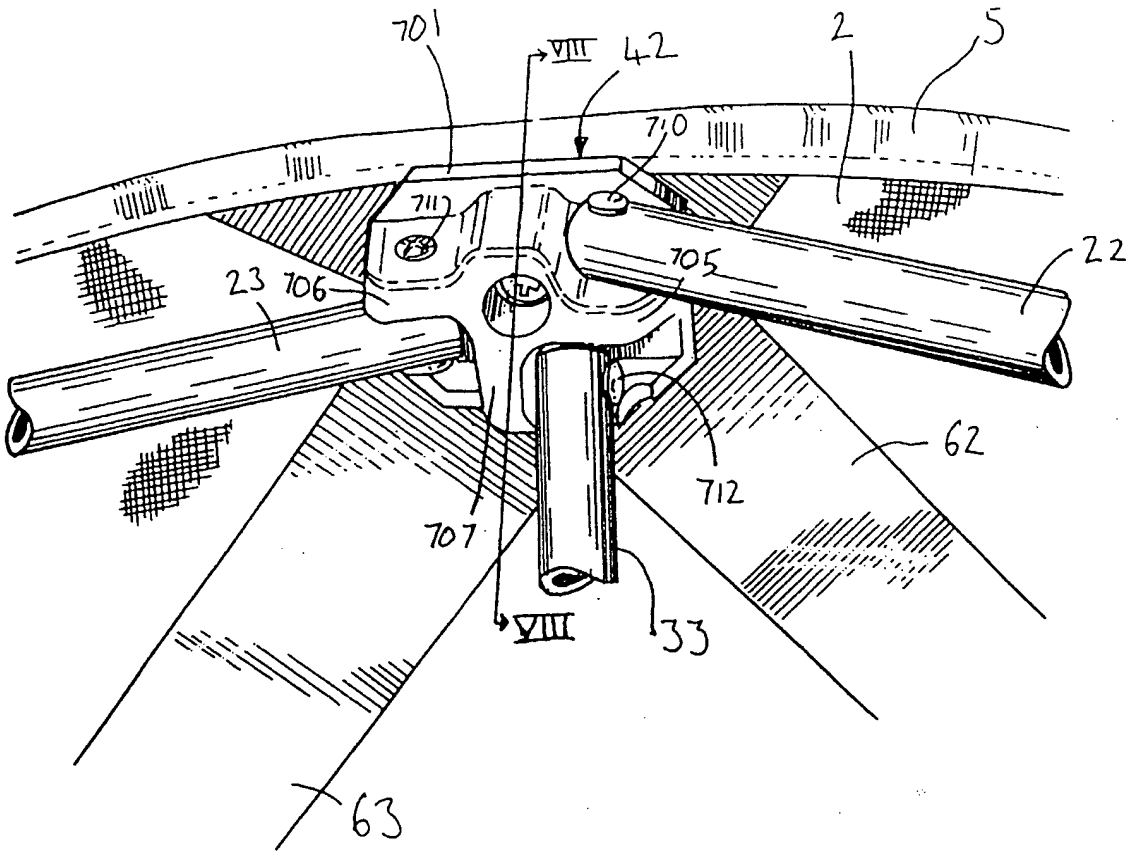

Fig. 7

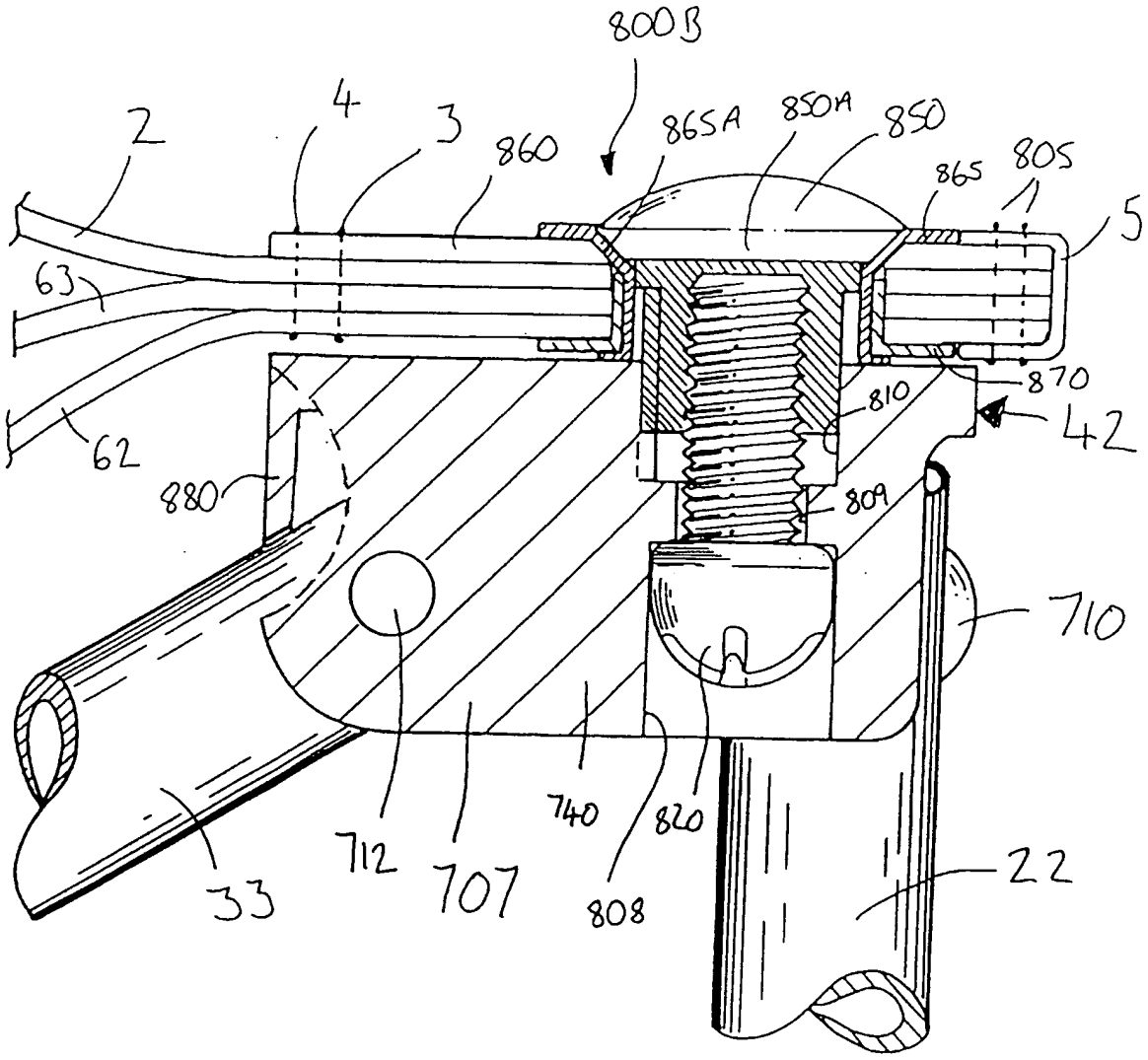
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Fig 8

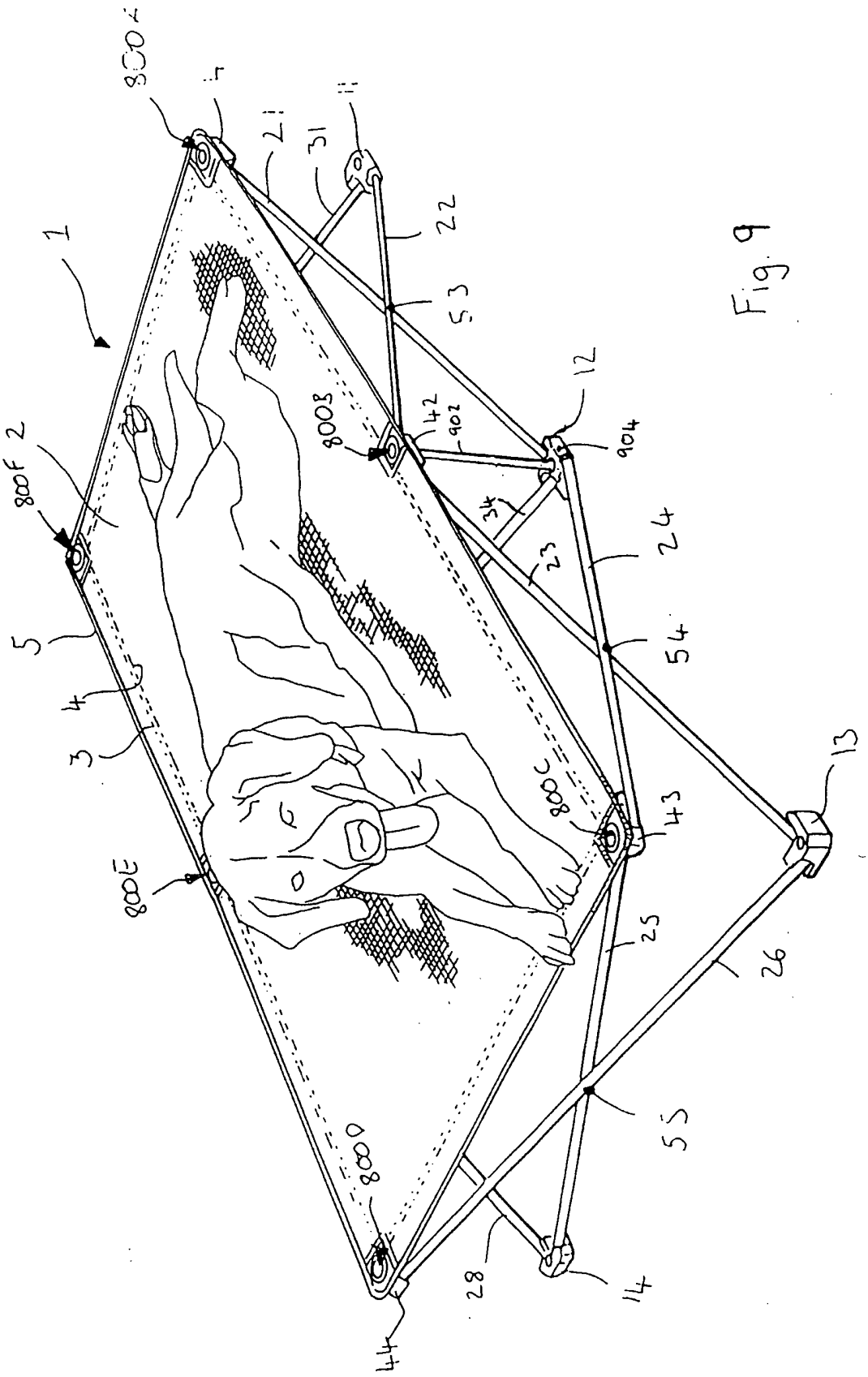
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Fig. 9